**PB104**

**Technical Datasheet**

**Bronze Alloy**

**Typical Applications**
- High performance gears
- Aerospace & Marine fasteners
- Shafts & Spindles
- Bearing components
- Pump components
- Thrust washers
- Nuts & Bolts
- Engine valve guides

**Product Description**
PB104 is a high performance wrought phosphor bronze generally used in more demanding applications. Like PB102 it offers superb spring qualities as well as high corrosion resistance that is close to that of aluminium bronzes in a range of atmospheric conditions. Its 8% tin content gives this bronze exceptional wear and bearing properties and offers a good cold formability rating.

**Key features**
- Excellent wear resistance
- Good spring properties
- Very good corrosion resistance
- Good cold forming properties
- Very high mechanical properties
- Good resistance to shock loading

**Availability**
Round bar, hexagon.

**Cut to size capability**
There are thirty power saws within the Smiths group including a fully automated magazine feed CNC rod blanking line. We can economically cut from one off blanks to the largest production run for immediate or just in time deliveries.

**Weldability**
Good.

**Related material specifications**
- CW453K
- CuSn8
- DTD265A

**Chemical Composition (weight %)**

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<th></th>
<th>Cu</th>
<th>Sn</th>
<th>P</th>
<th>Zn</th>
<th>Ni</th>
<th>Fe</th>
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**Mechanical Properties**

- Proof Stress: 300 - 400 N/mm²
- Ultimate Tensile Strength: 450 - 500 N/mm²
- Elongation (%): 15 - 20

**Physical Properties**

- Density: 8.8 g/cm³
- Melting Point: 1040 °C
- Modulus of Elasticity: 105,000 N/mm²
- Thermal Conductivity: 46 W/m °C
- Electrical Resistivity: 12% IACS

**Corrosion Resistance**
Excellent

**Machinability**
Good.

**Technical Assistance**

Our knowledgeable staff backed up by our resident team of qualified metallurgists and engineers, will be pleased to assist further on any technical topic.

**www.smithmetal.com**

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